

CLAIMS

1. A method of generating triggers for the provision of location based services in a mobile communication network supporting a plurality of mobile terminals over a given territory, the method characterized in that it includes the steps of:

- defining a set of target areas within said territory, each target area in said set being identified by respective geographic data,

10 - transforming (M1) said geographic data in a respective set of values of network related entities, said respective set of values being expected to be associated with a mobile terminal of said mobile network when located in the corresponding target area,

15 - monitoring (C1) the values comprised in said respective set as associated to at least one monitored mobile terminal in said mobile communication network,

- checking (C1) whether said values as monitored match with said set of values as expected to be 20 encountered, and

- when a match is found, which is indicative of said monitored mobile terminal being located in a given target area of said set, generating a trigger for prompting delivery of location based services related 25 to said given target area in said set towards said monitored mobile terminal.

2. The method according to claim 1, characterized in that, for each mobile terminal, said set of values includes at least one value selected among a power 30 value, a time value or a cell identifier relative to a cell different from a cell serving said mobile terminal.

3. The method according to claim 2, characterized in that said set of values includes at least one value 35 selected out of a group comprising: CPICH RSCP, PCCPCH

RSCP, GSM carrier RSSI, RTT in FDD, Rx Timing Deviation in TDD, SFN-SFN, RXLEV, TA.

4. The method according to claims 2 or 3, characterized in that said set of values includes at 5 least one value selected out of a group comprising: location areas (LA), routing areas (RA), cell identifiers (cell-ID) and corresponding adjacent frequencies (ARFCN).

5. The method according to any of the preceding 10 claims, characterized in that said the step of monitoring (C1) is carried out with said mobile terminal.

6. The method according to any of the preceding claim, characterized in that said the step of checking 15 (C1) is carried out with said mobile terminal.

7. The method according to any of the preceding claims, characterized in that said set of expected values includes at least one entity external to said mobile network.

20 8. The method according to any of the preceding claims, characterized in that it includes the step of starting, when said match is found, a set of location actions to improve the location of said mobile terminal being monitored within said given target area.

25 9. The method according to any of claims 1-4 or 7-8, characterized in that said step of checking (C1) is carried at the network node level.

30 10. The method according to any of claims 1-4 or 7-9, characterized in that said step of monitoring (C1) is carried at the network node level.

11. The method according to any of the preceding claims, characterized in that said operation of transforming (M1) said geographic data is carried out at the network infrastructure level.

12. The method according to any of claims 1-10, characterized in that said operation of transforming (M1) said geographic data is carried out at the mobile terminal level.

5 13. The method according to any of the preceding claims, characterized in that said the step of providing location based services is carried out at the network infrastructure level.

10 14. The method according to any of claims 1-12, characterized in that said the step of providing location based services is carried out the mobile terminal level.

15 15. The method according to claim 14, characterized in that it includes the step of providing communication facilities for permitting said monitored mobile terminal to receive information from at least one data base containing information related to said location base services.

20 16. A mobile communication network supporting a plurality of mobile terminals over a given territory and adapted to provide location based services to said mobile terminals, characterized in that said territory includes a set of target areas, each target area in said set being identified by respective geographic data, and in that the network has associated:

25 - a transformer module (M1) configured for transforming said geographic data in a respective set of values of network related entities, said respective set of values being expected to be associated with a mobile terminal of said mobile network when located in the corresponding target area,

30 - a monitor module (C1) configured for monitoring the values comprised in said respective set associated with at least one monitored mobile terminal in said mobile communication network, and checking (C1) whether

5 said values as monitored match with said set of values, and wherein said monitor module (C1) is configured so that, when a match is found, which is indicative of said monitored mobile terminal being located in a given target area of said set, a trigger is generated for prompting delivery (M2) of said location based services related to said given target area in said set towards said monitored mobile terminal.

10 17. The network according to claim 16, characterized in that, for each mobile terminal, said set of values includes at least one value selected among a power value, a time value or a cell identifier relative to a cell different from a cell serving said mobile terminal.

15 18. The network according to claim 17, characterized in that said set of values includes at least one value selected out of a group comprising: CPICH RSCP, PCCPCH RSCP, GSM carrier RSSI, RTT in FDD, Rx Timing Deviation in TDD, SFN-SFN, RXLEV, TA.

20 19. The network according to claims 17 or 18, characterized in that said set of values includes at least one value selected out of a group comprising: location areas (LA), routing areas (RA), cell identifiers (cell-ID) and corresponding adjacent frequencies (ARFCN).

20. The network according to any of claims 16-19, characterized in that said monitor module (C1) is at least partly hosted in said mobile terminals.

30 21. The network according to any of claims 16-20, characterized in that said set of expected values includes at least one entity external to said mobile network.

35 22. The network according to any of claims 16-21, characterized in that said monitoring module (C1) is configured for starting, when said match is found, a

set of location actions to improve the location of said mobile terminal being monitored within said given target area.

23. The network according to any of claims 16-22, 5 characterized in that said transformer module (M1) is hosted at the network infrastructure level.

24. The network according to any of the claims 16-22, characterized in that said transformer module (M1) is hosted at the mobile terminal level.

10 25. The network according to any of claims 16-24, characterized in that it includes a service delivery module (M2) for providing said location based services, said service delivery module (M2) being hosted at the network infrastructure level.

15 26. The network according to any of claims 16-25, characterized in that it includes a service delivery module (M2) for providing said location based services, said service delivery module (M2) being at least partly hosted at the mobile terminal level.

20 27. The network according to claim 26, characterized in that it includes communication facilities for permitting said monitored mobile terminal to receive information from at least one data base containing information related to said location 25 base services.

28. The network according to any of claims 16-19 or 21-27, characterized in that said monitor module (C1) is hosted at the network node level.

29. A computer program product loadable in the 30 memory of at least one computer and including software code portions for performing the steps of the method of any of claims 1 to 11 when said product is run on a computer.